

# Taking Plenary Time Seriously: Setting the Calendar in a Busy Legislature

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## Motivation

Legislatures face substantial time constraints that limit the number of issues that it can address in a legislative session. Taking up a procedural rule or policy issue on the floor uses up plenary time, reducing the amount of time left to vote on other issues. However, political scientists generally model legislative activity either over a single issue, or in an infinite game with an opportunity cost or discount rate. These models do not take into account the real tradeoffs that are made when a legislature chooses to take up one issue over another due to plenary time limitations.

## The Model

I model the decision of a busy legislature to elect a "Speaker" who sets the calendar of issues that will be addressed.

The legislature has  $N = 2k + 1$  members who each have preferences over  $S$  separable issue dimensions, and face a time constraint of  $T < S$  periods in the legislative session to take up policy. By definition, the legislature is "busy" — some issues will not be addressed in the legislative session. In the "legislative state of nature" (Cox 2006), there are no leadership positions or agenda-setting procedures. Without these positions or procedures, the legislative session takes up a random set of issues from  $S$  of size  $T$ .

### Assumptions:

- Each legislator has the same single-peaked utility function which is separable over each issue. Utility is derived only from policy; there are no explicit benefits from getting elected as Speaker.
- Each legislator  $n_i \in N$  has an ideal point  $p_{is}$  for each issue drawn from a distribution of ideal points for that issue  $F_s$ . For every issue, there is a known status quo,  $q_s \in Q$ , also drawn from the distribution  $F_s$ .

### Calendar Setting Game:

The legislature chooses the leadership position ("Speaker of the House") in a one-shot game at the start of the legislative session:

1. A legislator is randomly recognized to propose a calendar of  $T$  issues for the legislative session.
2. The legislature votes under majority rule on whether to appoint the proposer as Speaker and adopt the calendar, or conduct the session without a calendar.
3. If the calendar is adopted, each issue on the calendar is taken up by the floor.
4. If the calendar is rejected, a random set of  $T$  issues is chosen by nature, and these issues are taken up by the floor.
5. When a policy issue is taken up by the floor, one time period is used to debate and vote on the issue. This process ends with the new policy set at the ideal point of the median voter on that issue.

### Equilibrium:

The proposer chooses the calendar she most prefers that both the proposer and the majority of the legislature prefer to a random calendar. If no such calendar exists then the proposer is not appointed Speaker and a random calendar is used.

## Example

I simulate the results of the calendar setting game using an agent-based model for a legislature of 9 members with preferences over 9 separable issues for each value of  $T$  from 2 to 8. For each iteration, the ideal points for each issue are a random ordering of the points  $(-4, -3, -2, -1, 0, 1, 2, 3, 4)$ . The status quo for each issue is randomly drawn from the set  $(-4, -3, -2, -1, 0, 1, 2, 3, 4)$ . Each legislator has the same quadratic utility function:  $U_i(Q) = \sum_{q_s \in Q} -(p_{is} - q_s)^2$ .

Figure 1 shows the average expected utility over all of the members of the legislature for plenary time  $T$ .

Figure 1: Mean Expected Utilities for a Legislative Session of  $T$  Periods

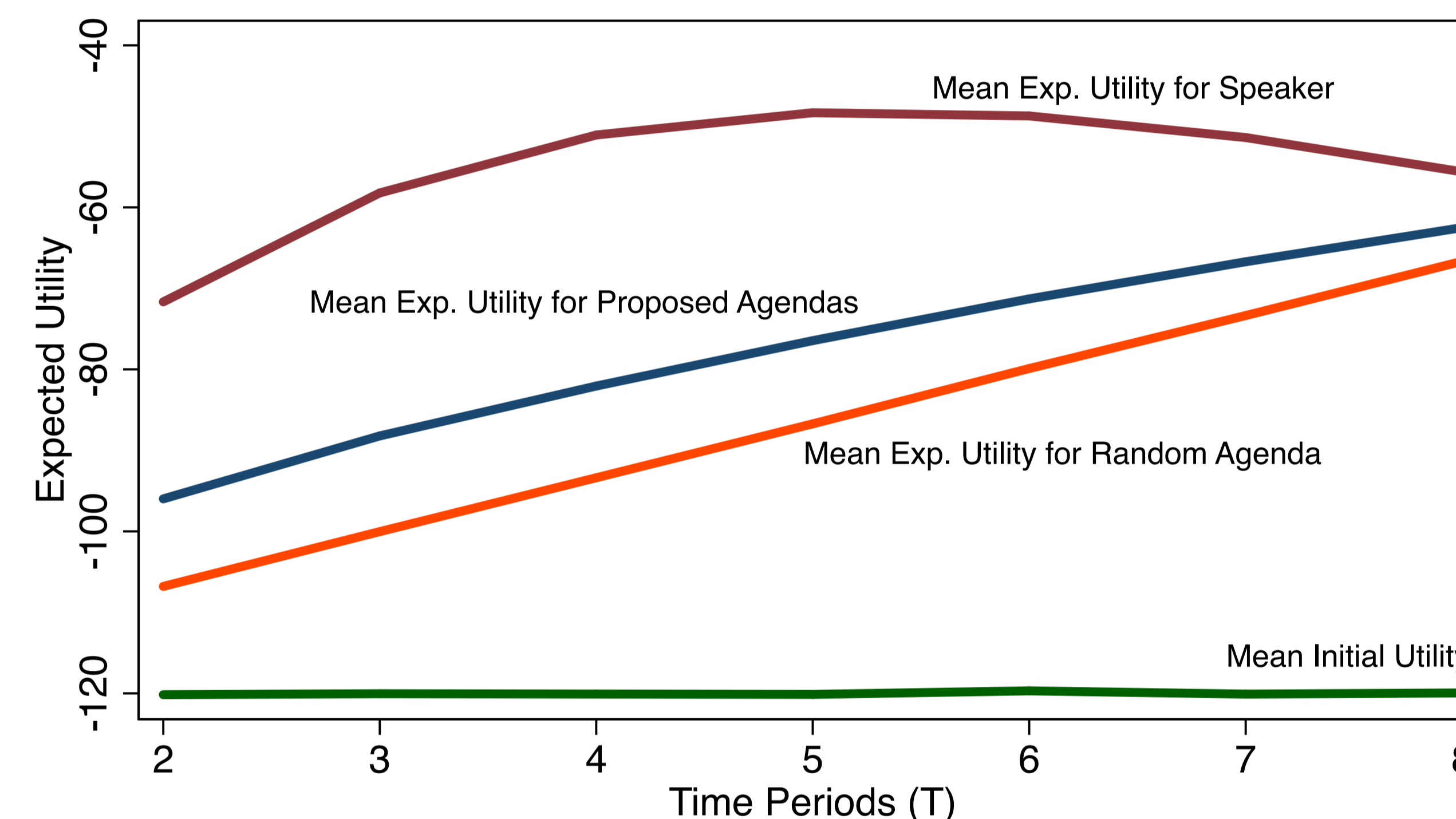
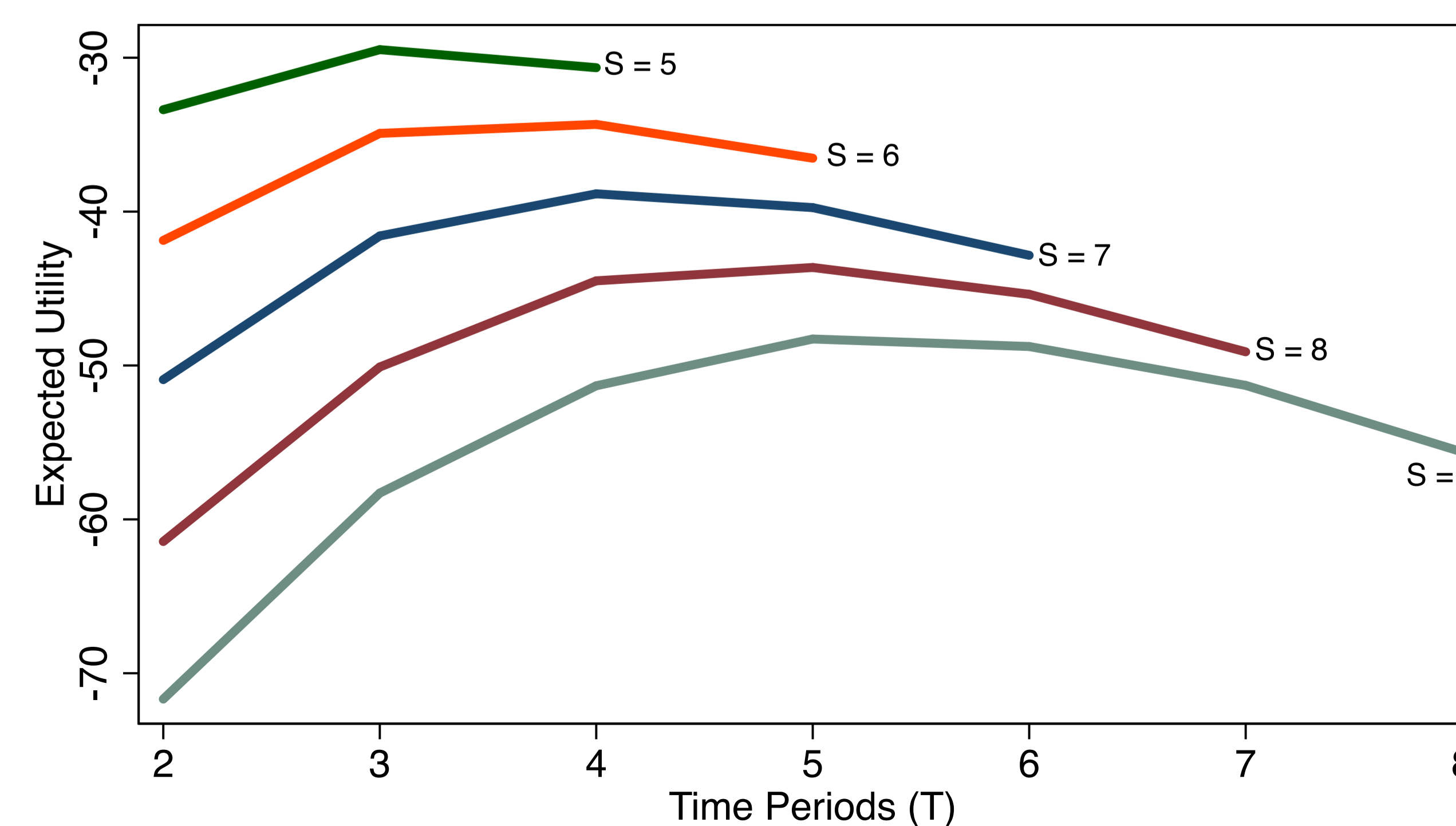


Figure 2 shows the mean expected utility of the legislator elected Speaker from a legislature with nine members and the same ideal point and status quo distributions as above, as the number of issues ( $S$ ) varies from five to nine, and the number of time periods ( $T$ ) varies from two to eight. The expected utility for the Speaker is maximized when  $T \approx (S + 1)/2$ .

Figure 2: Expected Utility for Speaker for a Session of  $S$  Issues and  $T$  Periods



## Model Extensions and Next Steps

- Endogenize the Speaker election stage into the plenary session:
- Electing a Speaker uses up plenary time.
- A randomly recognized legislator could choose to bring a single issue to the floor or propose a calendar for the remainder of the legislative session.
- Model finite bargaining over policies instead of assuming that all policy outcomes result in the issue median:
- This change separates calendar power from proposal power. The Speaker could control only the calendar of issues, or both the calendar and then recognition rights during policy bargaining on the floor.

## Conclusions

- Modeling legislative activity in *finite time* emphasizes the importance of calendar power and agenda setting. The majority of the legislators get higher expected utility from selecting a Speaker who sets the calendar compared to the random calendar in the "legislative state of nature."
- The value of electing a Speaker is greatest when plenary time is small relative to the number of possible issues to consider during the legislative session. As plenary time increases, the value of leadership decreases.
- Calendar power is both a positive and negative agenda power. The Speaker chooses (subject to majority approval), the set of bills that reach the floor and the set of bills that do not. This power is constrained in both directions by plenary time.
- The Speaker gets the greatest benefit from setting the calendar when there is roughly half as much plenary time as is needed to bring all issues to the floor. On average, this maximizes the speaker's positive agenda power of bringing the issues she most wants changed to the floor, while providing enough flexibility to exercise negative agenda power by preventing issues from coming to floor when the Speaker wants to preserve the status quo.

## References

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